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70. An isolated trichodiene synthase obtained from a *Fusarium venenatum* strain, selected from the group consisting of:

- (a) a trichodiene synthase having an amino acid sequence which has at least 97% identity with SEQ ID NO. 2;
- (b) a variant of the trichodiene synthase having an amino acid sequence of SEQ ID NO. 2 comprising a substitution, deletion, and/or insertion of one or more amino acids;
- (c) an allelic variant of (a) or (b); and
- (d) a fragment of (a) or (c) that has trichodiene synthase activity.

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71. The trichodiene synthase of claim 70, having an amino acid sequence which has at least 97% identity with SEQ ID NO. 2.

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72. The trichodiene synthase of claim 70, comprising the amino acid sequence of SEQ ID NO. 2 or a fragment thereof having trichodiene synthase activity.

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73. The trichodiene synthase of claim 72, comprising the amino acid sequence of SEQ ID NO. 2.

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74. The trichodiene synthase of claim 70, which is a variant of the trichodiene synthase having an amino acid sequence of SEQ ID NO:2 comprising a substitution, deletion, and/or insertion of one or more amino acids.

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75. The trichodiene synthase of claim 70, which is obtained from *Fusarium venenatum* ATCC 20334.

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76. The trichodiene synthase of claim 70, which is encoded by the nucleic acid sequence contained in plasmid pTri5 contained in *E. coli* NRRL B-30029.

#### REMARKS

The present application is a continuation of U.S. application Serial No.